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ROLE OF RURAL WOMEN IN AGRICULTURE AND HOUSEHOLD FOOD SECURITY IN FAISALABAD DISTRICT

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Rural women in the developing and transition countries play a fundamental role in producing, purchasing, processing, providing, storing and utilizing food to their families and thereby contribute to the household food and nutrition security. This paper investigates the women's dynamic role in the agricultural activities and intra household food/nutrition security in rural areas of the Faisalabad district, Punjab province of Pakistan. More specifically it analyzes the association between demographic characters of the respondents and their role in household food security. Multistage random sampling technique was used for the purpose of data collection. One Tehsil (sub-district) from District Faisalabad was selected through simple random sampling technique. One union council from this Tehsil was selected randomly. Three villages out of five villages and 40 respondents from each selected villages were selected randomly. Thus in total 120 women were interviewed from the selected households. Significantly positive relationship was found between women age and education with intra-household food and nutrition security. Though rural women have an active role in food utilization which is one of the main pillars of food security, yet majority of the women were facing problems in household food and nutrition security particularly affordability and access to food.

Keywords: Food security, rural household, women participation, food production, Pakistan.

INTRODUCTION

Household food insecurity is a pressing problem in the rural areas of developing countries. Degradation of natural resources, poverty, unequal distribution of food and scarcity of resources required for agriculture (water and land) etc. are some of the main causes of food insecurity (Hamelin *et al.*, 2008; Khalil, 2007). Food insecurity is a serious problem in Pakistan as a considerable portion of the rural population of country is food insecure, and as a coping strategy, the food insecure people have to consume less nutritious food (Suleri and Haq, 2009). Low purchasing power, illiteracy and conflicts are some of the major barrier to the provision of a balanced food nutritious (Farkhanda *et al*., 2009). Controlling this crisis particularly in the rural areas is a challenge for the national agencies as well as international donors.

Access to sufficient, safe and nutritious food for healthy and active life for all people at all times is generally refer to as food security (FAO, 2003). Household food security is the application of this concept to the family level. Food is a basic need for growth and daily nourishment of human beings, and physical, social and economic access to food is a basic human right (Maxwell, 1996). Malnutrition and under-nourishment decrease the productivity of individuals not only at household level but also affect local, national and global socio-economic development. This problem is particularly severe in the developing and transition countries (FAO, 2010). Women in the rural areas of developing countries play an active role in intra-household food and nutrition security. They allocate their time to food production and reproduction. In food production, they work and earn wages; in home production, they are the household managers but their work is considered as non-productive; and reproduction is also considered as part of home production and remains un-rewarded (World Bank, 2009).

Recent debates on the gender dimensions of household food security have focused on the significance of demographic characteristics of females in the milieu of household food security. In this perspective Olumakaiye and Ajayi (2006) argued that educational level attained by women had a fairly high degree of relationship with food and nutrition provision for household members for food security. They concluded that women with higher education were likely to provide varieties of food there by increasing the household food security. Poor education may also lead to an inadequate knowledge about nutritious food, healthier methods of food preparation and cooking techniques. Women's access to education and income is also a determining factor in levels of nutrition and child health (Kennedy and Peters, 1992). Children of mothers who had spent five years in primary education were 40% more likely to live beyond the age of five.

There is a direct linkage between agriculture and food security. Particularly small farmers depend on agriculture for their subsistence (Ata *et al*., 2012; Horn and Breeze, 2006). Like other developing countries, majority of women in Pakistan's rural areas are involved in the agriculture

production process (Shahbaz *et al*., 2010). Rural women of Pakistan are engaged in a variety of agricultural activities such as land preparation, seed preparation, collecting farm yard manure, weeding, threshing and harvesting. Women also undertake the responsibility of cleaning, drying, and storage of grains. Taking care of livestock is another task that is usually performed by rural women. They collect, cut and serve fodder, clean sheds and process animal products. In addition to these, they perform various household tasks, such as, cooking, washing, house cleaning, fetching water, collecting fire woods and care of children and elderly members of the family. Women also try to ensure that all members of family receives adequate share of food, yet their involvement in productive activities related to livestock and agriculture is undervalued and regarded as routine housework (Hassan, 2008; Mansoor *et al*., 2012).

Rural areas of Pakistan are generally food insecure and food insecurity is higher among women. However the role of women in household food security is under-reported, despite of the fact that females' contribution in the rural economy of Pakistan is significant. Similarly little literature is available on the linkage between demographic characters of women and household food security in Pakistan. This paper intends to contribute to this emerging debate by analyzing women role in the household food security (in the backdrop of agricultural activities) and the association between their age and education and role in household food security. Following are the hypotheses for this paper:

i. Higher the education of the women, higher will be the role in intra household food and nutrition security
ii. Higher the age of the women, higher will be the role in intra household food and nutrition security

MATERIALS AND METHODS

Punjab is the largest province of Pakistan and the center of agricultural production. Faisalabad is the second largest disctrict of the Punjab and it is the hub of agriculture as well as textile industry. Wheat, sugarcane, cotton, vegetables and pulses are the main crops of the area. The study was conducted in the rural area of district Faisalabad (31.4180^{o} latitutude, 73.0790 East longitude). Multistage random sampling technique was used for the purpose of data collection. At first stage, one Tehsil (Jaranwala) out of five Tehsils was selected by using simple random sampling technique. At second stage, one union council (UC-38) was selected through simple random sampling technique. This union council consisted of five villages; 3 villages (Chak No-119 GB, Chak No-120 GB, Chak No-122 GB) were selected randomly. Forty households from each selected villages were selected randomly. Thus 120 women were interviewed by taking female member from each selected households. A comprehensive and validated interview schedule was devised in the light of research objectives. The Statistical Package for Social Sciences (SPSS) was used for analyzing the data.

RESULTS AND DISCUSSION

Demographic characteristics such as age, education, family size etc. considerably influence the behaviors and perception of the people. Therefore, socio-economic characteristics of the respondents were recorded which are presented in the Table 1. It is evident that more than one third (34.1%) of the respondents were illiterate, more than one fourth (30.0%) of the respondents had primary level (up to 5 years of schooling) of education.

Table 1. Distribution of the respondent's according to their socio economic characteristics

Characteristics	Frequency	Percentage
Education		
Illiterate	41	34.1
Primary	36	30.0
Middle	26	21.7
Matriculate and above	17	14.2
Age		
Up to 30	43	35.8
31-40	35	29.2
41 and above	42	35.0
Family size (number)		
1-3	10	8.3
4-6	42	35.0
7-9	47	39.2
10-12	20	16.7
13+	1	0.80

Data presented in Table 1 also indicate that more than one third (35.8%) of the respondents belonged to up to 30 age group, 29.2% respondents belonged to 31-40 age group, while 35.0% respondents belonged to 41 and above age group. Income is one major factor, which controls the food and nutrient intake. Households at the higher end of income distribution consumed significantly higher amounts of nutrients, through dairy products, non-vegetarian foods and fruits (Birthal, 1996). Table 1 also indicate that majority of the households consisted of 7-9 family members. The results regarding income of the household indicate that half (50.0%) of the respondents had up to Rs.10000/- monthly income, about one third (32.5%) had income between Rs.10001-20000 monthly income. The results show that most of the respondents belonged to low income group.

The respondents (women) were asked to identify their role in household food and nutrition security. Table 2 shows the perception of the respondents in this regards. Majority (65.8%) of the respondents reported that they were responsible of family food and nutrition to great extent; whereas remaining one third (34.2%) of the respondents

reported that they were responsible of family food and nutrition to some extent. FAO (2008) reported that women, as providers of food, had a fundamental role in assuring improved nutritional status of family. Women play a pivotal role in securing and preparing food for the family. They had the primary responsibility for providing nutritious food to their family, care of children and for the nutrition information at household level. Likewise Gittinger (1990) argued that women also make sure that all members of the family receive adequate share of food so they suffer from malnutrition and hunger by themselves also in the other Asian countries context as in Nepal (Bishokarma and Amir, 2014). Women are responsible for purchasing food so they spend their time and their income. Women decide what foods to buy and how to prepare it food preparation involves a substantial amount of time for collecting fuel and preparing ingredients

Table 2. Perceived role of women in household food and nutrition security

Responsible	Frequency	Percentage
To great extent	79	65.8
To some extent	41	34.2
Total	120	100.0

The perceived role of respondents in various food related activities is given in Table 3. More than half (53.3%) of the respondents involved in agriculture activities to great extent, 29.2% of the respondents to some extent, and 17.5% of the respondents were not at all involved in agriculture activities. Majorities (56.6%) of the respondents were engaged in livestock production and management to great extent, and similarly an overwhelming majority (95.8%) of the respondents participated to great extent in food preparation. Less than three fourth (71.7 %) of the respondents were involved to great extent in intra-household food allocation. Less than one fifth (13.3%) of the respondents participated to great extent in non agriculture activities. In a previous study Mahmuda and Yoshihito (2008) reported that women had a significant role in the management of their families as well as equal participation in crop production, post-harvest activities, poultry rearing, production and management of livestock and fisheries, income generating activities (Riasat *et al*., 2014).They were also involved in stitching, embroidery, baskets making, making papers, flower vases, and in different small scale business. Women from the poorest households sometimes work outside the home as paid laborers for their family survival.

The respondents were also asked to indicate their role in household food related activities. The results (Table 3) in this regards revealed that more than 95% of the respondents were involved in household food preparation activities, 90% of the women were solely involved in distribution/serving the food at the household level and similarly 60% of the respondents told that they are also involved in preservation of food in the form of jam, pickle, ghee etc. It was also found that 45% of the respondents were heavily involved in maintain/cleaning of the food store rooms.

The association between education of the respondents and their role in intra-household food and nutrition security was calculated by using chi-square test. Data presented in Table 4 illustrates the association between education of the

Table 3 . Participation of women in food securing activities

Food securing activities	To great extent		To some extent		Not at all		Total
	Frequency	%	Frequency	%	Frequency	%	
Agriculture activities	64	53.3	35	29.2	21	17.5	120
Livestock production/ management	68	56.6	28	23.3	24	20.1	120
Food preparation	115	95.8	5	4.2	0	0.0	120
Daily food provision	102	85.0	18	15.0	0	0.0	120
Intra household food allocation	86	71.7	32	26.7	2	1.7	120
Non agriculture activities	16	13.3	17	14.2	87	72.5	120

Table 4. Association between education and role in intra household food and nutrition security

Education	Rural women's dynamic role in intra-household food and nutrition security			Total
	Low	Medium	High	
Illiterate	11	20	10	41
	26.8%	48.8%	24.4%	100%
Primary	4	6	26	36
	11.1%	16.7%	72.2%	100%
Middle and above	3	5	35	43
	7.0%	11.6%	81.4%	100%
Total	18	31	71	120
	15.0%	25.8%	59.1%	100%

Chi-square = 12.4, d.f. = 4, Gamma = .239

Table 5. Association between age and role in intra household food and nutrition security

	Women's dynamic role in intra household food and nutrition security			Total
	Low	Medium	High	
Up to 30	8	17	18	43
	18.6%	39.5%	41.9%	100.0%
31-40	4	20	11	35
	11.4%	57.1%	31.4%	100.0%
41 and above	6	10	26	42
	14.3%	23.8%	61.9%	100.0%
Total	18	47	55	120
	15.0%	39.2%	45.8%	100.0%

Chi-square = 10.20, Significance = 0.037*, Gamma = .213

respondents and their role in intra household food and nutrition security. Chi-square value shows a highly significant association between education of the respondents and their role in intra household food and nutrition security. Gamma value shows a positive relationship between the variables. It means that majority of the literate women had more roles in intra household food and nutrition security as compared to illiterate women. Majority literate respondents (i.e. 72.2% primary passed and 81.4% middle and above) had high role in intra-household food and nutrition security. So the hypothesis "higher the education of the women, higher will be the role in intra household food and nutrition security" is accepted.

Table 5 presents the association between age of the respondents and their role in intra household food and nutrition security. Chi-square value shows a significant association between age of the respondents and their role in intra household food and nutrition security. Gamma value shows a positive relationship between the variables. It means majority of the aged respondents had more roles in intra household food and nutrition security as compared to low aged respondents. Above table also shows that among low age respondents (up to 30 years), 15.6% had low, 39.5% had medium (39.5%) and 41.9% had high role in intra household food and nutrition security. While middle age group (31-40), 11.4% respondents had low, 57.1% had medium and 31.4% had high role in intra household food and nutrition security. Whereas in high age group (41 and above), 61.9% of the respondents had high role in intra household food and nutrition security. So the hypothesis "higher the age of the women, higher will be the role in intra household food and nutrition security" is accepted.

Previous researchers have reported the association of socio-economic characters with food security. For instance, Bashir *et al.* (2012) found a significant impact of family income on food security in the Punjab province of Pakistan. They also reported an inverse relationship between family size and food security. Likewise proper food absorption and utilization is also considered as the determinant of food security i.e., if food consumption patterns are not suitable then it results in the form of malnutrition (Chen and Kates, 1994), and our research has indicated the crucial role of women in household food consumption.

Conclusions: The results of the study indicated that majority (65.8%) of the respondents (women) were responsible to great extent for family food and nutrition security, while most of the rural women were involved to great extent in the agriculture and livestock activities. However the data revealed that most of the women felt overburden due to their multiple tasks. Significant association between education and food security indicate that empowering women through education is the key to achieve intra-household food and nutrition security. The data also concluded that education is inevitable to ensure better and healthy food for the family members. Most of the respondents were not satisfied with their decision making powers at the household level and informed that mostly male members of the house are responsible for major decision.

Access to food is a basic pillar of food security but the results showed that very few women knew about the balanced diet. When we explained the concept of balanced diet, the immediate response was that 'it is out of the reach for us, because high priced of fruits and meat'. Gender discrimination in food distribution was also found there as most of the respondent agreed that the males (either children or adults) are given preference while distributing food at the household level. In the case of food shortages, the households have to cut the size of meals, skip one meal and eat less preferred (cheap) food. The respondents suggested that government should launch awareness campaign for the household women regarding balanced diet. In this perspective, access to household women to (adult) education would also be a beneficial step in this regards.

REFERENCES

Ata, S., B. Shahbaz, M. Ahmad and I. A. Khan. 2012. Factors hampering date-palm production in the Punjab:

a case study of D.G. Khan District. Pak. J. Agri. Sci. 49:217-220.

Bashir, M.K., S. Schilizzi and R. Pandit. 2012. Food security and its determinants at the cross roads in Punjab Pakistan, Working Paper 1206, School of Agricultural and Resource Economics, University of Western Australia, Crawley, Australia.

Birthal, P.S. 1996. Nutrient consumption pattern in rural areas of western Uttar Pradesh. Agric. Econ. Res. Rev. 9:175-188.

Bishokarma, N.K. and R.M. Amir. 2014. Gender and food insecurity: food entitlement in resource scarce areas in the far-western region of Nepal. J. Glob. Innov. Agric. Soc. Sci. 2:45-51.

Chen, R.S. and R.W. Kates. 1994. World food security: prospects and trends. Food Policy. Special issue: Climate Change and World Food Security. 19:192-208.

Farkhanda A., F. Nazir, A.A. Maann and S. Tasleem. 2009. Household food security situation in slum areas of Pakistan. Pak. J. Agri. Sci. 46:148-152.

FAO, 2003. The state of food insecurity in the world: Rome declaration on world food security and world food summit plan of action. Food and Agriculture Organization of the United Nations, Rome, Italy.

FAO, 2010. The state of food insecurity in the world. Food and Agriculture Organization of the United Nations, Rome, Italy.

FAO, 2008. High food prices and food security, poor households worst hit. The state of food insecurity in the world. Food and Agriculture Organization of the United Nations Rome, Italy.

Gittinger, J. 1990. Household food security and the role of women. World Bank discussion paper No. 96. Washington, D.C.

Hamelin, A. M., C. Mercier and A. Bedard. 2008. Perceptions of needs and responses in food security: divergence between households and stakeholders. Pub. Health Nutri. 11:1389-1396.

Hassan, M.Z.Y. 2008. Analysis of the obstacles to gender mainstreaming in agricultural extension in the Punjab, Pakistan. a case study of district Muzaffargarh, Ph.D. dissertation, Department of Agri. Extension, University of Agriculture, Faisalabad. Pakistan.

Horn, F. P. and R. G. Breeze. 2006. Agriculture and food security. Ann. New York Academy of Sciences. 894:9-17.

Kennedy, S. and P. Peters. 1992. Household food security and child nutrition: the interaction of income and gender of household head. World Development 20:1077-1085.

Khalil, J.K. 2007. Food security with special reference to Pakistan. HEC Press, Islamabad, Pakistan.

Mahmuda, H. and I. Yoshihito. 2008. Participation and decision making role of rural women in economic activities: a comparative study for members and non-members of the micro-credit organizations in Bangladesh. J. Soc. Sci. 4:229-236.

Mansoor, K.M. Chaudhry, S. Muhammad, I. Ashraf and U. Ghafoor. 2012. Farmer's perceptions of livestock production practices introduced by Punjab Rural Support Program (PRSP). Pak. J. Agri. Sci. 49:233-235.

Maxwell, S. 1996. Food security: a post modern perspective. Food Policy 21:155-170,

Olumakaiye, M.F. and A.O. Ajayi. 2006. Women's empowerment for household food security: the place of education. J. Human Ecol. 19:51-55.

Riasat, A., M. I. Zafar, I. A. Khan, R. M. Amir and G. Riasat. 2014. Rural development through women participation in Livestock care and management in district Faisalabad. J. Glob. Innov. Agric. Soc. Sci. 2:31-34.

Shahbaz B., T. Ali, I. A. Khan and M. Ahmad. 2010. An analysis of the problems faced by farmers in the mountains of Northwest Pakistan: challenges for agri. extension. Pak. J. Agri. Sci. 47:415-418.

Suleri, A. Q. and S. Haq. 2009. Food insecurity in Pakistan. Sustainable Development Policy Institute Islamabad and World Food Prog, Islamabad, Pakistan.

World Bank, 2009. Gender in agriculture sourcebook. The World Bank, Food and Agriculture Organization and International Fund for Agricultural Development. Washington DC.